

Claims:

1. A polishing pad for precise polishing of the surface of a lapped glass workpiece for use in data recording media,
5 the polishing pad comprising:

a base and a polishing portion laminated on the surface of said base and contacting the surface of the glass workpiece when polishing the glass workpiece;

said polishing portion being formed of a foam made of a
10 synthetic resin having a 100% modulus of 11.8 MPa or less;
and

the maximum height, R_{max} , of the surface roughness of said polishing portion, being 70 μm or less.

15 2. The polishing pad according to claim 1, wherein the polishing pad is subjected to a dressing treatment with a load of 25 to 45 gf/cm^2 for 10 to 40 minutes.

20 3. The polishing pad according to claim 1, wherein the period of time for said polishing portion to reach its durability limit is 125 hours or more.

25 4. The polishing pad according to claim 1, wherein the surface roughness, R_a , of said polishing portion is 7 μm or less.

5. A method for manufacturing a glass substrate for use in data recording media in which a polishing pad is used, the method comprising:

30 contacting the surface of a lapped glass workpiece with the polishing pad with a load of 35 to 70 gf/cm^2 on the lapped glass workpiece; and

polishing the lapped glass workpiece over a polishing period time in units of minute such that the product between
35 the polishing period of time and said load in units of gf/cm^2

is 160 or more.

6. A method for manufacturing a glass substrate for use in data recording media, the method comprising:

5 lapping a glass workpiece by use of a hard pad and a polishing agent containing particles of about 1.2 μm in average particle size; and

polishing the glass workpiece obtained in said lapping by use of a soft pad and a polishing agent containing

10 particles of about 0.6 μm in average particle size.

7. The method according to claim 6, wherein in said polishing the glass workpiece obtained, the soft pad is made to contact the glass workpiece with a load of 35 to 70 gf/cm^2 ,
15 and the product between the load in units of gf/cm^2 and the polishing period of time in units of minute is 160 or more.

8. The method according to claim 6, wherein said lapping includes an amount of grinding of 30 to 40 μm .

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9. The method according to claim 6, wherein said polishing of the glass workpiece obtained includes an amount of grinding of 0.5 to 10 μm .

25 10. A glass substrate for use in data recording media manufactured by the method according to claim 5, wherein:

the micro-waviness height is 0.3 nm or less measured by using a three dimensional surface structure analysis microscope, with the measurement wavelengths, λ , set to fall
30 within the range from 0.18 to 0.40 mm.